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providing in an aqueous medium (i) a culture of a microorganism having N-acetylneuraminic acid adolase or a treated matter of the culture, (ii) a culture of a microorganism capable of producing pyruvic acid or a treated matter of the culture, (iii) N-acetylmannosamine, and (iv) an energy source which is necessary for the formation of pyruvic acid;

allowing N-acetylneuraminic acid to form and accumulate in the aqueous medium; and

recovering N-acetylneuraminic acid from the aqueous medium.

18. (New) A process for producing N-acetylneuraminic acid which comprises:

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providing in an aqueous medium (i) a culture of a microorganism having N-acetylneuraminic acid synthetase activity or a treated matter of the culture, (ii) a culture of a microorganism capable of producing phosphoenolpyruvic acid or a treated matter of the culture, (iii) N-acetylmannosamine, and (iv) an energy source which is necessary for the formation of phosphoenolpyruvic acid;

allowing N-acetylneuraminic acid to form and accumulate in the aqueous medium; and

recovering N-acetylneuraminic acid from the aqueous medium.

REMARKS

New Claims 17 and 18 are presented simply in order to more specifically recite various preferred embodiments of the present invention. No new matter has been added.

Claims 1-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Vann et al. Glycobiology, 1997, Vol. 7(5):697-701 ("Vann (a)"), or Vann et al. J.